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L12: Entry 1 of 10

File: USPT

Sep 10, 2002

DOCUMENT-IDENTIFIER: US 6447778 B1

TITLE: Peptide compositions for the treatment of HIV infection

Brief Summary Text (11):

The recombinant core antigen of hepatitis B has the capability of self-assembling into 27 millimeter particles which are highly immunogenic in experimental animals. These HBV core particles may be conjugated directly with peptides, using recombinant DNA technology. Fusion proteins can be produced between the HBV core antigen and defined sequence peptides with high epitope density, which lead to high titer antibodies, as well as to long lasting neutralizing antiviral immunity. Hepatitis B core antigens and self-assembled HBc-HIV peptide fusion protein may be used as protein carriers.

Detailed Description Text (18):

Other peptides which may be used in the vaccines of this invention may be from the gp160 of HIV-1. Epitopes of HIV-1 gp160 have been shown to be recognized by T cells of HIV-1 infected subjects. See Clerici et al., "Interleukin-2 Production Used to Detect Antigenic Peptide Recognition By T-Helper Lymphocytes From A symptomatic HIV-Seropositive Individuals", Nature, Vol. 339, pages 383-386 (1989). In addition, epitopes of HIV-1 gp160 are involved in affecting the course of HIV-1 infection. Since the carrier PPD recruits T cell help, the coupling of peptides to PPD whose sequences correspond to an HIV-1 T cell epitope would result in a vaccine that is a powerful inducer of T cell response to the HIV-1 T cell epitope. Therefore, epitopes such as T1, described by Clerici et al., and HIV-1 cytotoxic T lymphocyte (CTL) epitopes present on reverse transcriptase may be used in the vaccines of this invention. (See Hosmalin et al., "An Epitope of HIV-1 Reverse Transcriptase Recognized by Both Mouse and Human CTL", Proc. Natl. Acad Sci, USA, Vol. 87, page 2344 (1990)). Further, these peptides, or other peptides with similar properties, may be coupled to PPD and included with the MN-PND-PPD cocktail vaccine.